TGF-β1 Antibody

Monoclonal Mouse IgG_1 Clone # 9016

Catalog Number: MAB240

DESCRIPTION

Specificity	Detects TGF-β1 from human, mouse, rat, and other species in direct ELISAs and Western blots. In sandwich ELISAs, less than 2% cross-reactivity with recombinant human (rh) TGF-β3 and recombinant amphibian TGF-β5 and no cross-reactivity with recombinant porcine TGF-β2 or rhTGF-β2 is observed.
Source	Monoclonal Mouse IgG_1 Clone # 9016
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant TGF-β1 and latent TGF-β1
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

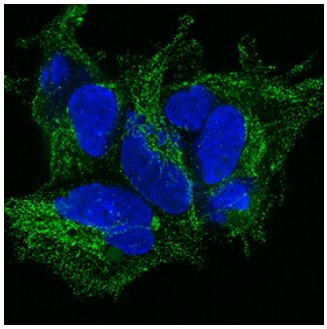
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	Recombinant Human TGF-β1 (Catalog # 240-B) under non-reducing conditions only
Immunocytochemistry	3-25 µg/mL	See Below
Immunohistochemistry	8-25 µg/mL	See Below
Intracellular Staining by Flow Cytometry	2.5 µg/10^6 cells	See Below
Human TGF-β1 Sandwich Immunoassay		**Reagent**
ELISA Capture	2-8 µg/mL	TGF-β1 Antibody (Catalog # MAB240)
ELISA Detection	0.1-0.4 µg/mL	TGF-β1 Biotinylated Antibody (Catalog # BAF240)
Standard		Recombinant Human TGF-β1 (Catalog # 240-B)
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	
Neutralization	Measured by its ability to neutralize TGF-β1 inhibition of IL-4-dependent proliferation in the HT-2 mouse T cell line. Tsang, M. *et al*. (1995) Cytokine **7**:389. The Neutralization Dose (ND_{50}) is typically 0.3-1.0 µg/mL in the presence of 0.25 ng/mL Recombinant Human TGF-β1 and 7.5 ng/mL Recombinant Mouse IL-4.	

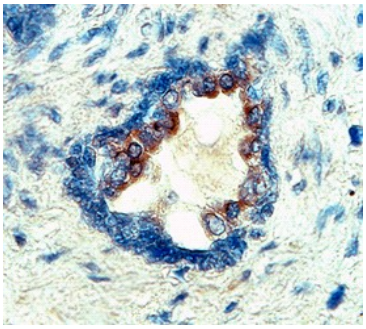
DATA

Immunocytochemistry



TGF-β1 in HEK293 Human Cell Line. TGF-β1 was detected in immersion fixed HEK293 human embryonic kidney cell line using Mouse Anti-TGF-β1 Monoclonal Antibody (Catalog # MAB240) at 3 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 493-conjugated Anti-Mouse IgG Secondary Antibody (green; Catalog # NL009) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

Immunohistochemistry



TGF-β1 in Human Prostate Cancer Tissue. TGF-β1 was detected in immersion fixed paraffin-embedded sections of human prostate cancer tissue using Mouse Anti-TGF-β1 Monoclonal Antibody (Catalog # MAB240) at 25 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific labeling was localized to the cytoplasm of epithelial cells in the prostate gland. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

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Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

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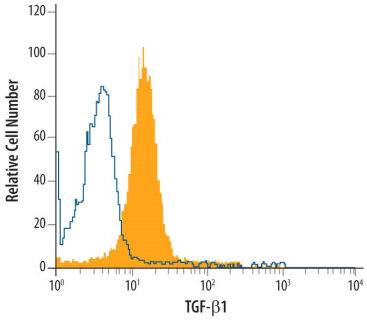
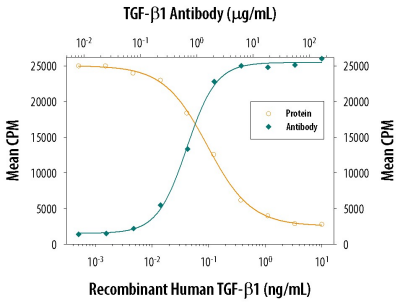
Intracellular Staining by Flow Cytometry



Detection of TGF-β1 in PC-3 Human Cell Line by Flow Cytometry. PC-3 human prostate cancer cell line was stained with Mouse Anti-TGF-β1 Monoclonal Antibody (Catalog # MAB240, filled histogram) or isotype control antibody (Catalog # MAB002, open histogram), followed by Allophycocyanin-conjugated Anti-Mouse IgG $F(ab')_2$ Secondary Antibody (Catalog # F0101B). To facilitate intracellular staining, cells were fixed with paraformaldehyde and permeabilized with saponin.

Neutralization



TGF-β1 Inhibition of IL-4-dependent Cell Proliferation and Neutralization by TGF-β1 Antibody. Recombinant Human TGF-β1 (Catalog # 240-B) inhibits Recombinant Mouse IL-4 (Catalog # 404-ML) induced proliferation in the HT-2 mouse T cell line in a dose-dependent manner (orange line). Inhibition of Recombinant Mouse IL-4 (7.5 ng/mL) activity elicited by Recombinant Human TGF-β1 (0.25 ng/mL) is neutralized (green line) by increasing concentrations of Mouse Anti-TGF-β1 Monoclonal Antibody (Catalog # MAB240). The ND_{50} is typically 0.3-1.0 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

TGF-β1, -2, and -3 are a closely related group of proteins (70-80% sequence homology) that are produced by many cell types and function as growth and differentiation factors. The active forms of TGF-β1, -2, and -3 are disulfide-linked homodimers.

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